

DEPT OF EDUCATION OFFICE OF THE STATE SCHOOL EXAMINER

an elongated intermediate image transfer member running substantially in a vertical direction and positioned between the pair of side frames, the intermediate image transfer member having a first side;

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and moved in an attachment/detachment direction toward and away from the first side for attachment and detachment of the process cartridge with respect to the pair of side frames.

5 2. The color image forming device as claimed in claim 1, wherein the electrostatic latent image bearing bodies extend in an axial direction between the pair of side frames, each exposure unit comprising an LED array extending in the axial direction and fixedly secured to the frame.

10 3. The color image forming device as claimed in claim
2, wherein each process cartridge at least assembles therein
the developing unit and the electrostatic latent image bear-
ing body, each LED array facing each electrostatic latent
image bearing body in such a direction that the electro-
15 static latent image bearing body is moved away from the LED
array during detachment of the process cartridge from the
pair of side frames.

4. The color image forming device as claimed in claim 1, further comprising a plurality of developing agent holding units positioned beside corresponding one of the electrostatic latent image bearing bodies, each developing agent holding unit temporarily holding residual developing agent on the electrostatic latent image bearing body and for returning the held residual developing agent to the developing agent bearing body during a predetermined cycle other than

corresponding one of the plurality of electrostatic latent image bearing bodies and housing therein developing agents of different colors, and a layer thickness regulation member in contact with the developing agent bearing body and positioned below the developing agent bearing body for regulating a thickness of a layer of the developing agent formed thereon, the developing agent comprising a non-magnetic single component type developing agent;

10 a plurality of chargers each positioned in confrontation with the latent image bearing surface of corresponding ones of the electrostatic latent image bearing bodies for charging the latent image bearing surface; and

15 a plurality of exposure units that expose charged surfaces of corresponding ones of the electrostatic latent image bearing bodies.

11. The color image forming device as claimed in claim 10, wherein the developing agent comprises polymerized toner produced by suspension polymerization process.

20 12. The color image forming device as claimed in claim 10, further comprising a plurality of developing agent holding units positioned beside corresponding one of the electrostatic latent image bearing bodies, each developing agent holding unit temporarily holding residual developing agent on the electrostatic latent image bearing body and for returning the held residual developing agent to the developing

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agent bearing body during a predetermined cycle ther than exposing cycle.

13. The color image forming device as claimed in claim 12, wherein each developing agent holding unit comprises a
5 cleaning roller positioned below the electrostatic latent image bearing body, the cleaning roller holding the residual toner remaining on the electrostatic latent image bearing surface after the image transfer from the electrostatic latent image bearing body to the intermediate image transfer
10 member.

14. The color image forming device as claimed in claim 10, further comprising:

a supply tray for supplying an image recording medium to the intermediate image transfer member, and

15 a discharge tray for receiving an image recording medium formed with a color image, the intermediate image transfer member, a plurality of the electrostatic latent image bearing bodies, and a plurality of the developing units being positioned below the discharge tray but positioned
20 above the supply tray.

15. The color image forming device as claimed in claim 14, wherein the frame comprises a pair of side frames, the elongated intermediate image transfer member being positioned between the pair of side frames; and

25 wherein each developing unit is assembled in each

process cartridge, each process cartridge being positioned at a side facing the first side and movable in an attachment/detachment direction toward and away from the first side for attachment and detachment of the process cartridge with respect to the pair of side frames.

16. The color image forming device as claimed in claim 10, further comprising:

a secondary image transfer device positioned immediately below the intermediate image transfer member for transferring an image from the intermediate image transfer member onto an image recording medium;

a fixing device for fixing the image onto the image recording medium after the image has been transferred from the intermediate image transfer member onto the image recording medium; and

a reverse mechanism for reversing a surface of the image recording medium to provide another image onto the identical image recording medium, the reverse mechanism being connected to a downstream of the fixing device and to an upstream of the secondary image transfer device by way of a reverse print pathway extending below the intermediate image transfer member.

17. The color image forming device as claimed in claim 15, further comprising:

a secondary image transfer device positioned immedi-

ately below the intermediate image transfer member for transferring an image from the intermediate image transfer member onto an image recording medium;

5 a fixing device for fixing the image onto the image recording medium after the image has been transferred from the intermediate image transfer member onto the image recording medium; and

10 a reverse mechanism for reversing a surface of the image recording medium to provide another image onto the identical image recording medium, the reverse mechanism being connected to a downstream of the fixing device and to an upstream of the secondary image transfer device by way of a reverse print pathway extending below the intermediate image transfer member, the pathway being also positioned at a side
15 confronting a second side of the intermediate image transfer member, the second side being opposite to the first side.

18. A color image forming device comprising:

a frame;

20 an elongated intermediate image transfer member running substantially in a vertical direction, the intermediate image transfer member having a first side running downwardly;

25 a plurality of electrostatic latent image bearing bodies aligned substantially in the vertical direction and positioned in confrontation with the first side of the inter-

mediate image transfer member, each electrostatic latent image bearing body having a latent image bearing surface ;

5 a plurality of developing units each comprising a developing agent bearing body disposed in confrontation with a corresponding one of the plurality of electrostatic latent image bearing bodies and housing therein developing agents of different colors;

a supply tray for supplying an image recording medium to the intermediate image transfer member; and

10 a discharge tray for receiving an image recording medium formed with a color image, the intermediate image transfer member, a plurality of the electrostatic latent image bearing bodies, and a plurality of the developing units being positioned below the discharge tray but positioned
15 above the supply tray.

19. The color image forming device as claimed in claim 18, wherein the frame comprises a pair of side frames, the elongated intermediate image transfer member being positioned between the pair of side frames; and

20 wherein each developing unit is assembled in each process cartridge, each process cartridge being detachably positioned at a side facing the first side and moved in an attachment/detachment direction toward and away from the first side for attachment and detachment of the process cartridge with respect to the pair of side frames.
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sitioned in confrontation with the first side of the intermediate image transfer member;

5 a plurality of developing units each comprising a developing agent bearing body disposed in confrontation with a corresponding one of the plurality of electrostatic latent image bearing bodies and housing therein developing agents of different colors;

10 a secondary image transfer device positioned immediately below the intermediate image transfer member for transferring an image from the intermediate image transfer member onto an image recording medium;

15 a fixing device for fixing the image onto the image recording medium after the image has been transferred from the intermediate image transfer member onto the image recording medium; and

20 a reverse mechanism for reversing a surface of the image recording medium to provide another image onto a reverse surface of the identical image recording medium, the reverse mechanism being connected to a downstream of the fixing device and to an upstream of the secondary image transfer device by way of a reverse print pathway extending below the intermediate image transfer member.

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